

DEQ In-water Proposal

Objective

- *Expedite sediment cleanup*

Criteria for Site Selection

- *Relatively simple sites*
- *Upper portion of Study Area*
- *Environmental justice concerns*
- *Cooperative performing parties*

Candidate Sites

- *RM11E*
- *Willamette Cove*

DEQ NWR Cleanup Program Staffing

Keith Johnson CU, Site Assessment, Spills

- Dan H – Leadworker, PM, hydro*
- Matt M – Leadworker, PM
- Dana B – PM, hydro
- Ken T – PM, hydro
- Cindy R – PM, tox
- Scott M - PM
- Debbie B - PM
- Alex L - PM
- Anna C - PM
- Dave L - PM
- Jim O - PM
- Mike G - PM
- Mike R - PM
- Shawn R - PM
- Rebecca WA - PM
- Gerald G - Admin
- Dawn W - Admin

Kevin Parrett CU and Leaking USTs

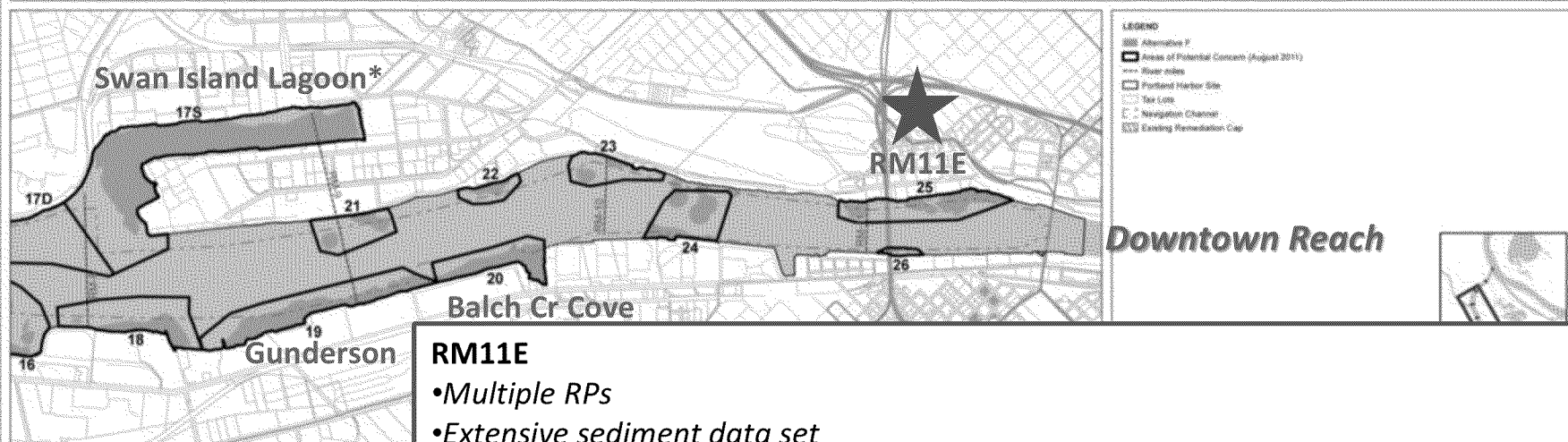
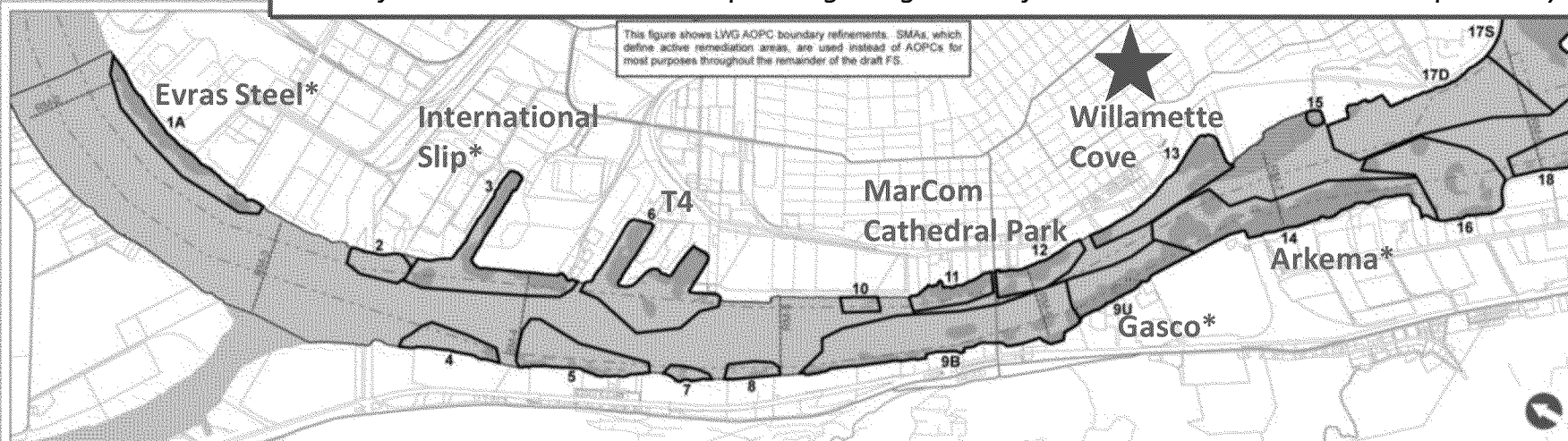
- Chuck H – Leadworker, PM*
- Jeff S – Leadworker, PM
- Jen S – PM, sediments*
- Henning L – PM, hydro
- Bob W – PM, hydro
- Ken C – PM, hydro
- Tom G – PM, Eng
- Erin M – PM, Eng
- Mike P – HH Tox
- Jen P – Eco Tox
- Mark P - PM
- Sarah M - PM
- Rob H - PM
- Kevin D - PM
- Brent F - Admin

***Proposed in-water project team leads** 2

Major Areas of Contamination

Willamette Cove

- Opportunity to work with single lead RP on multi-PRP site
- Fairly complicated site: significant upland and riverbank contamination; NRDA restoration opportunities and not well defined nature and extent of contamination
- Env Justice issues: trespass and homeless camps, and high community interest for action
- Port of Portland interested in expediting integration of NRDA restoration and cleanup remedy



RM11E

- Multiple RPs
- Extensive sediment data set
- Primarily PCBs, mostly surface sediment, no significant upland, no significant GW
- Most upriver site in Study Area
- RPs have previously expressed interest in expedited cleanup. Current interest unknown₃

Potential Schedule for DEQ Oversight of In-water – RM11E

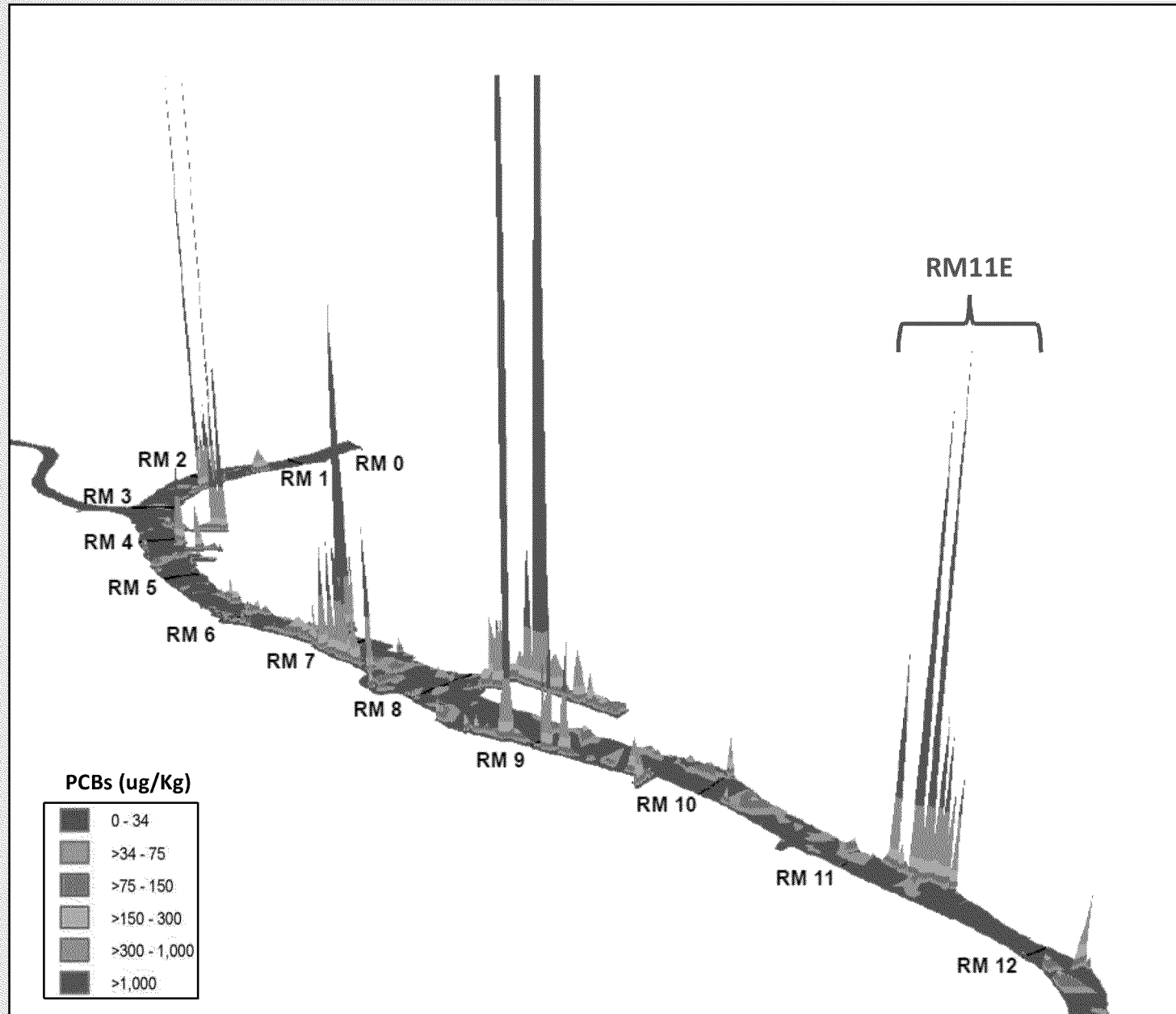
Task	Duration (months)	2015				2016				2017				2018				2019				2020			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
EPA Milestones to ROD	36																								
- EPA Provides Remedy Concept to DEQ and Partners (June 2015)	--		X																						
- NRRB Mtg on Remedy Concept (Nov 2015)	--				X																				
- EPA Issues Proposed Plan (Early 2016)	--					X																			
- EPA Issues ROD (Late 2017)	--											X													
DEQ Schedule for In-water Proposal - State Authority	58	Remedy Selection				Remedial Design								RA1				RA2*							

- *Anticipated construction completion Oct 2019*
- *DEQ issues site-specific ROD under Oregon regulatory authority (OAR 340-122-090)*
- *Performing parties conduct RD/RA under DEQ oversight under consent judgment*
- *Remedy would be consistent with but not necessarily identical to EPA PH ROD*
- *Need close coordination with EPA and stakeholders throughout process*
- *Risk to performing parties is that RD/RA expenditures may be wasted if EPA ultimately does not approve work*
- *Performing parties will eventually want liability release from EPA*

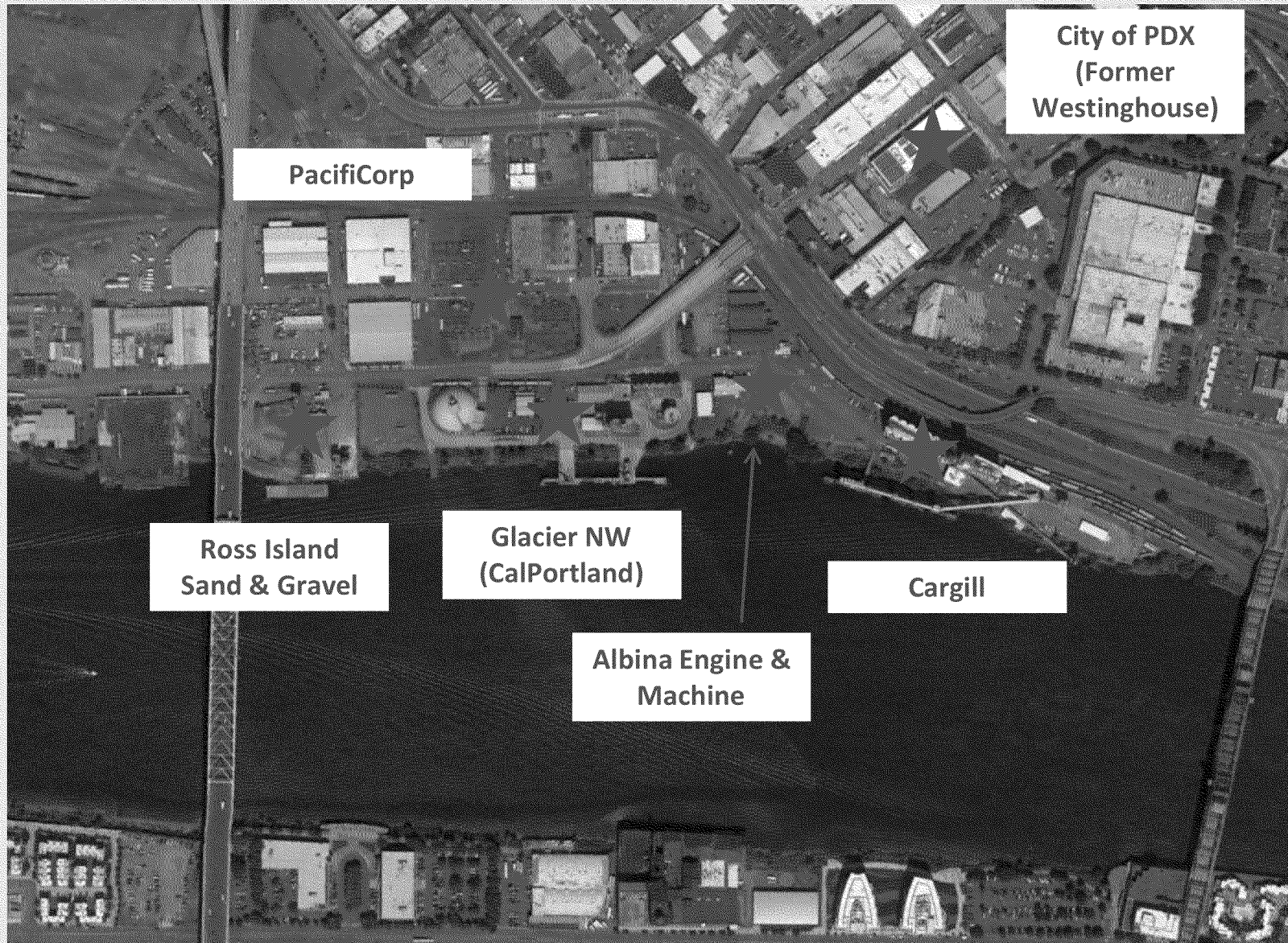
Potential Schedule for DEQ Oversight of In-water – RM11E

Task	Duration (months)	2015				2016				2017				2018				2019				2020			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
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- EPA Issues ROD (Late 2017)	--											X													
DEQ Schedule for In-water Proposal - State Authority	58	Remedy Selection				Remedial Design								RA1				RA2*							
REMEDY SELECTION	18	Remedy Selection																							
DEQ Negotiates Consent Order with Performing Parties	6	Order																							
CERCLA/Oregon Feasibility Study Bridge Document (not needed for RM11E)	--																								
DEQ Prepares Staff Report (Proposed Plan) under OAR 340-122-0090	9	Staff Rpt																							
- EPA reviews draft report (4 wks)	--					X																			
- Resolve EPA comments (2 wks)	--					X																			
- Revise draft report (2 wks)	--					X																			
- Provide draft to performing parties for courtesy review (2 wks)	--					X																			
- Finalize Staff Report (4 wks)	--					X																			
DEQ Prepares ROD	3					ROD																			
- Submit public notice to Oregon Bulletin and local newspaper (4 wks)	--					X																			
- Public comment period (4 wks)	--					X																			
- Prepare ROD (4 wks)	--					X																			
REMEDIAL DESIGN	30									Remedial Design															
DEQ Negotiates Consent Judgement with Performing Parties	6									Judgement															
- Negotiate with performing parties (12 wks)	--									X															
- Submit public notice to Oregon Bulletin and local newspaper (4 wks)	--									X															
- Public comment period (4 wks)	--									X															
- Finalize consent judgement and file with court (4 wks)	--									X															
Permitting, Access Agreements, Additional Studies	42	Permitting				Permitting																			
- Negotiate access agreements with landowners	--																								
- Additional data collection and engineering studies (e.g., flood rise)	--																								
- Permitting and ESA consultation	--																								
Draft/Final Basis of Design Report (30% design)	12									BOD/30% RD															
- DEQ review (4 wks)	--											X													
- Comment resolution (4 wks)	--											X													
- Finalize report (4 wks)	--											X													
Draft Final Design Package (90% design)	9													90% RD											
- DEQ review (4 wks)	--														X										
- Comment resolution (4 wks)	--														X										
Final Design Package (plans, specs, supporting documents)	3													100% RD											
- DEQ approves final design	--														X										
REMEDIAL ACTION (CONSTRUCT)	10																	RA1				*RA2			
Procure Construction Contractor	3																	Procure							
Prepare Construction Documents (QAPP, Field Monitoring Plan, etc.)	6																	Field Plans							
Contractor Sources Materials, Equipment, Subs	3																	Procure							
Construct (4 month summer in-water work window)	4																	C1							
Contingent (2nd mobilization and construction)	4																					*C2			

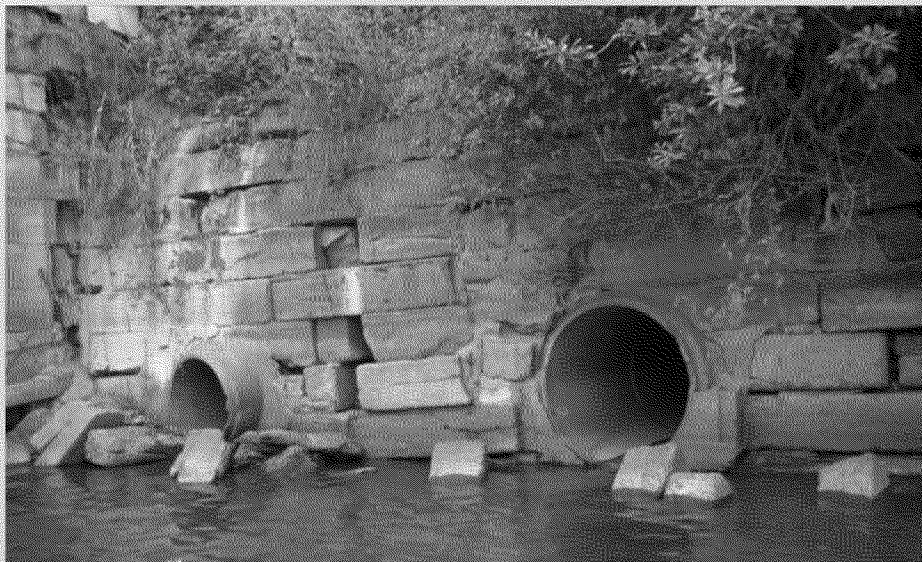
River Mile 11 East



Site Ownership



Shoreline Features



City and ODOT outfalls by RIS&G Dock



Looking upriver behind CalPortland dock

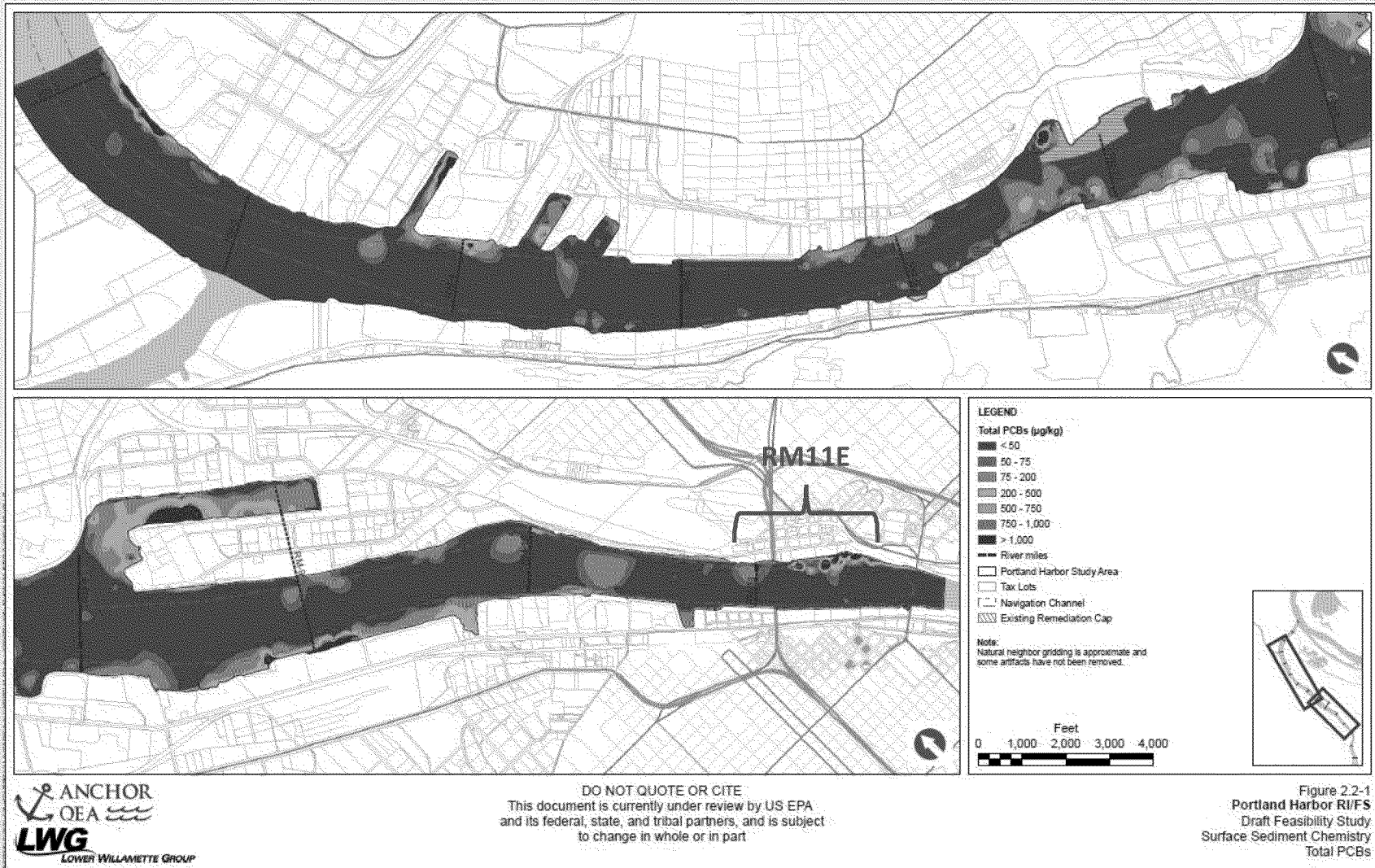


City outfall & historical crane structure

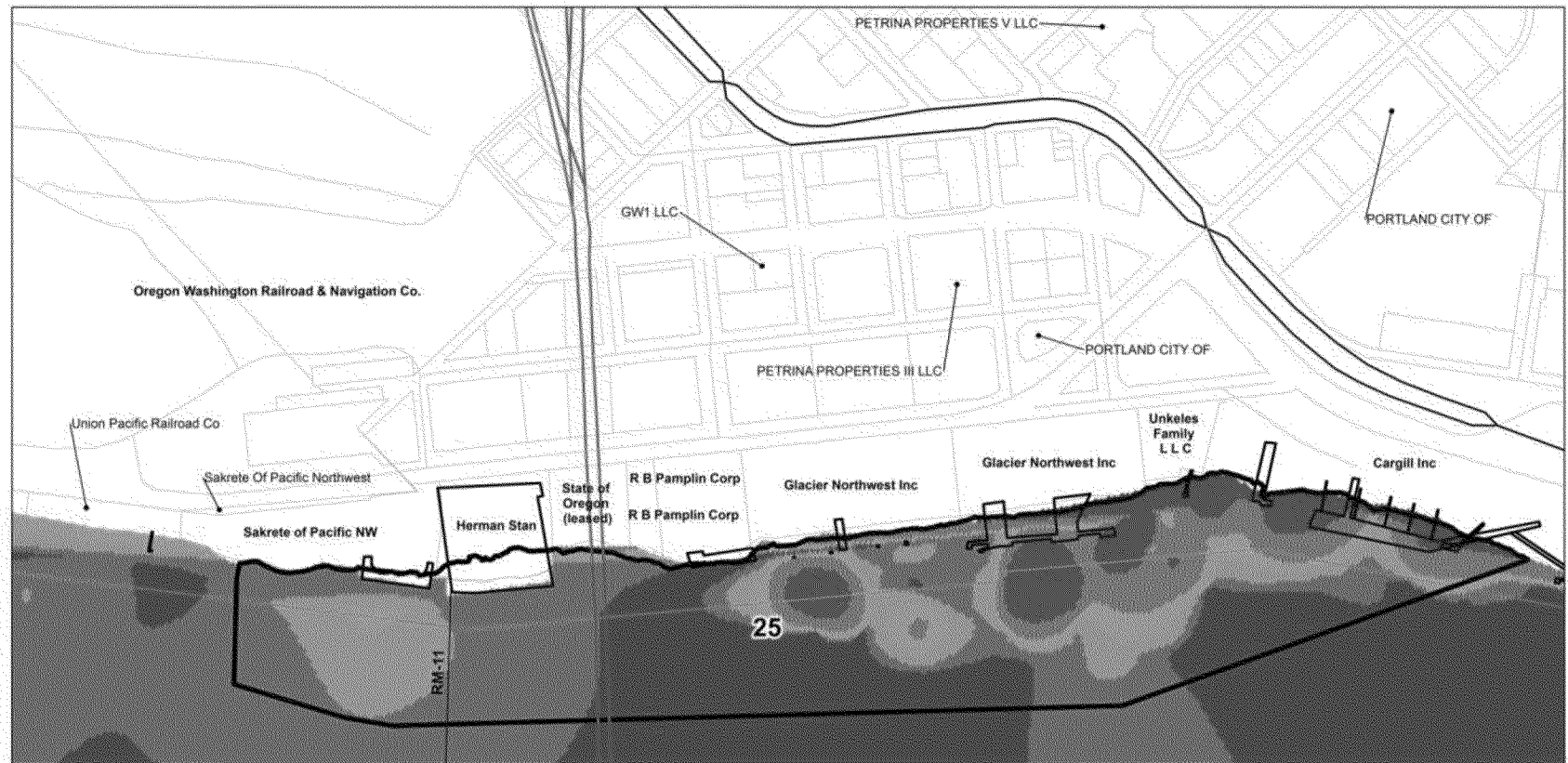


Remnant pilings behind Cargill dock

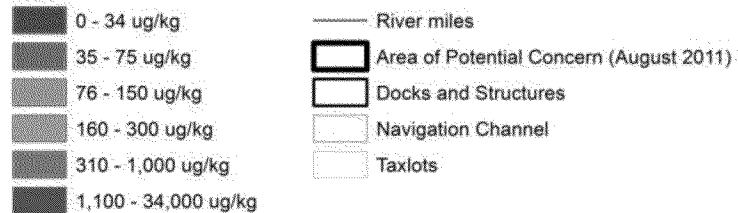
PCBs in Surface Sediment



PCBs in Surface Sediment



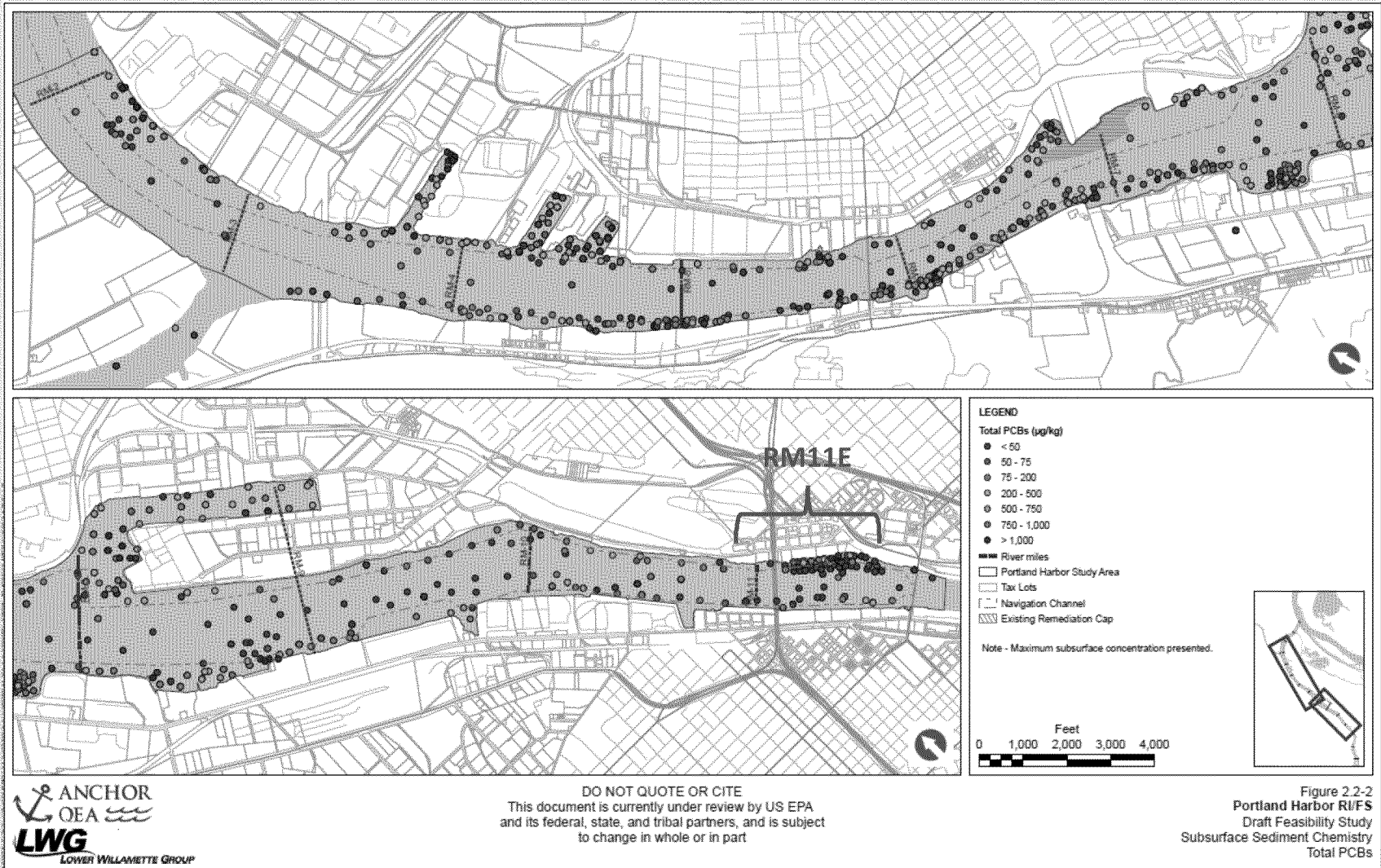
Legend



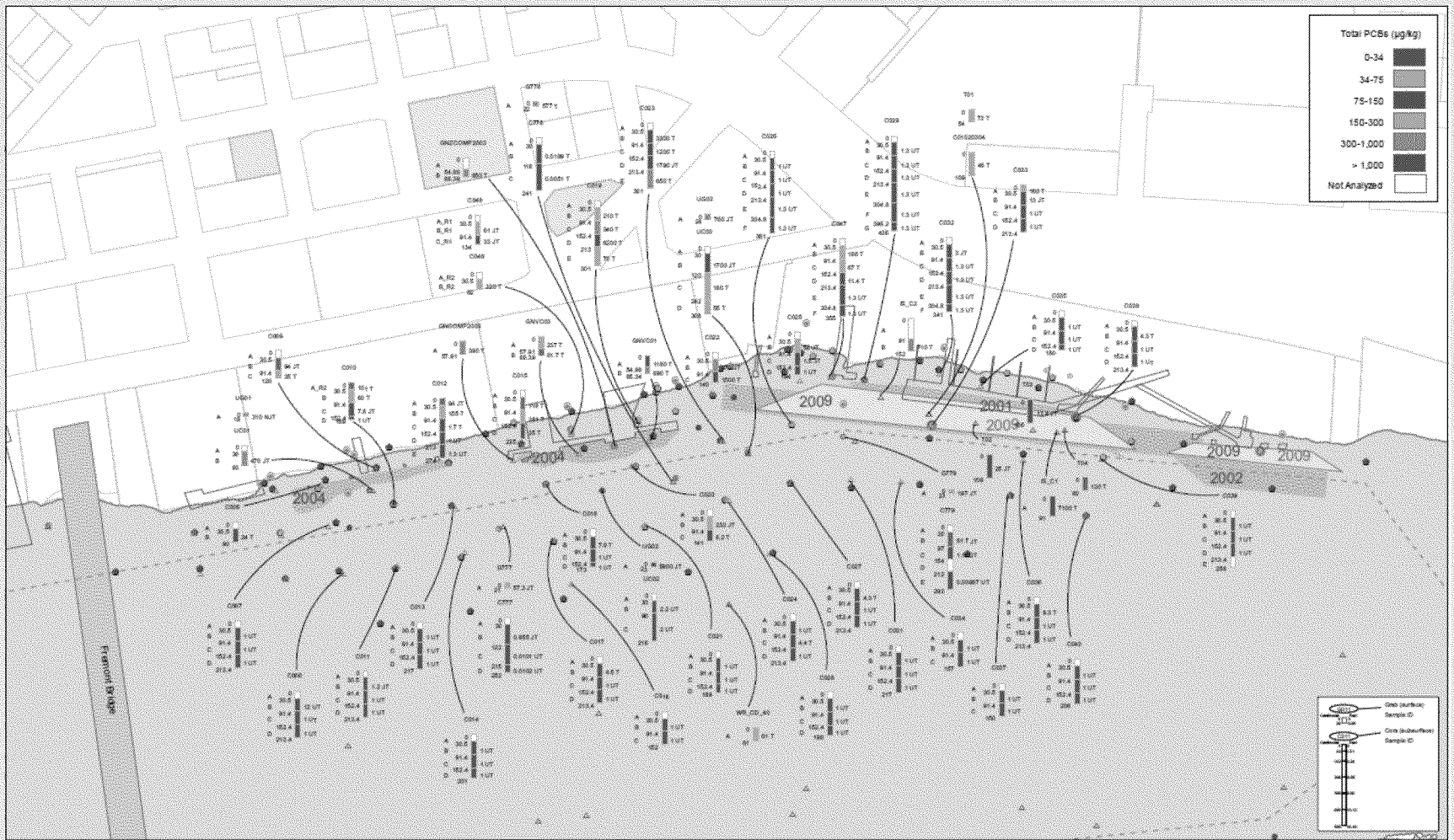
Sediment Surface PCB Distribution



PCBs in Subsurface Sediment



PCBs in Subsurface Sediment



integral
consulting inc.

DATA SOURCES:
Transportation, Property, or Boundary: Metro RLIS
Channel & River Miles: US Army Corps of Engineers
Depth-related information: David Evans and Associates, Inc.
ECSI: Section of core are generally placed at core sample location
If not possible a tag line indicates the sample location

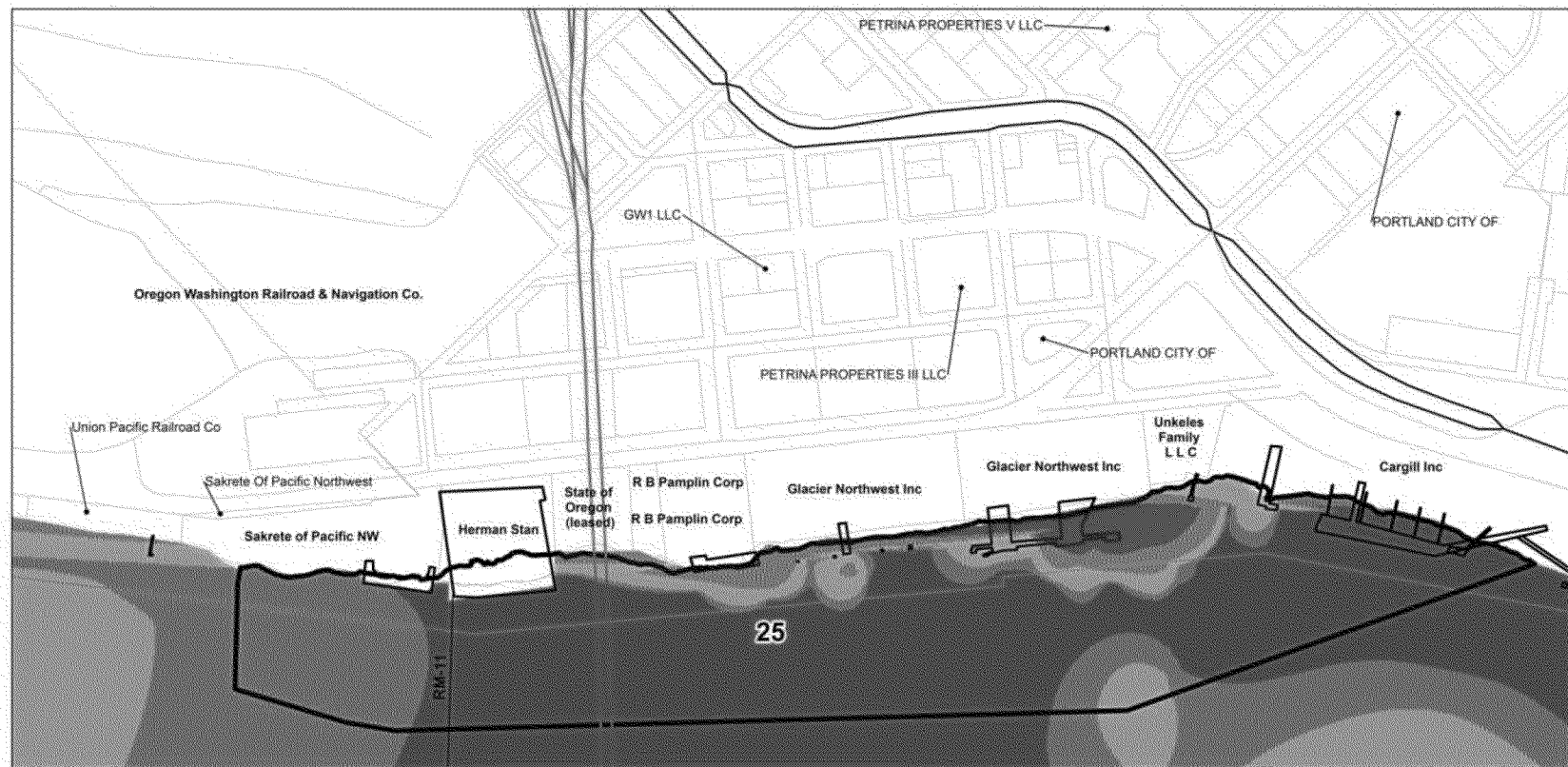
0 100 200 300 400 500 Feet

LWG
LOWER WILLAMETTE GROUP

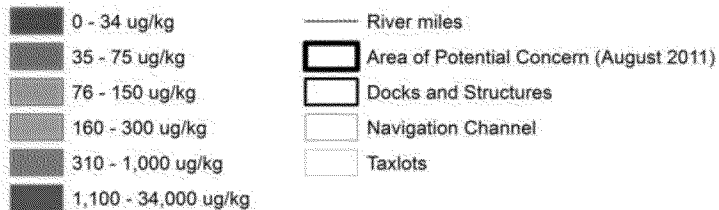
DRAFT
DO NOT DISTRIBUTE
This document is currently under review by US EPA and its federal, state, and local partners, and is subject to change or release on a case-by-case basis.

Map H3.1-2b
Portland Harbor RI/FS
Remedial Investigation Report
Subsurface Sediment Chemistry
Total PCBs (µg/kg)
River Mile 11.0 - 11.8 - Inset 1

PCBs in Subsurface Sediment



Legend



Sediment Subsurface PCB Distribution



RM11E Cross-Section B

Hydrogeological Conceptual Site Model Cross Section B-B'

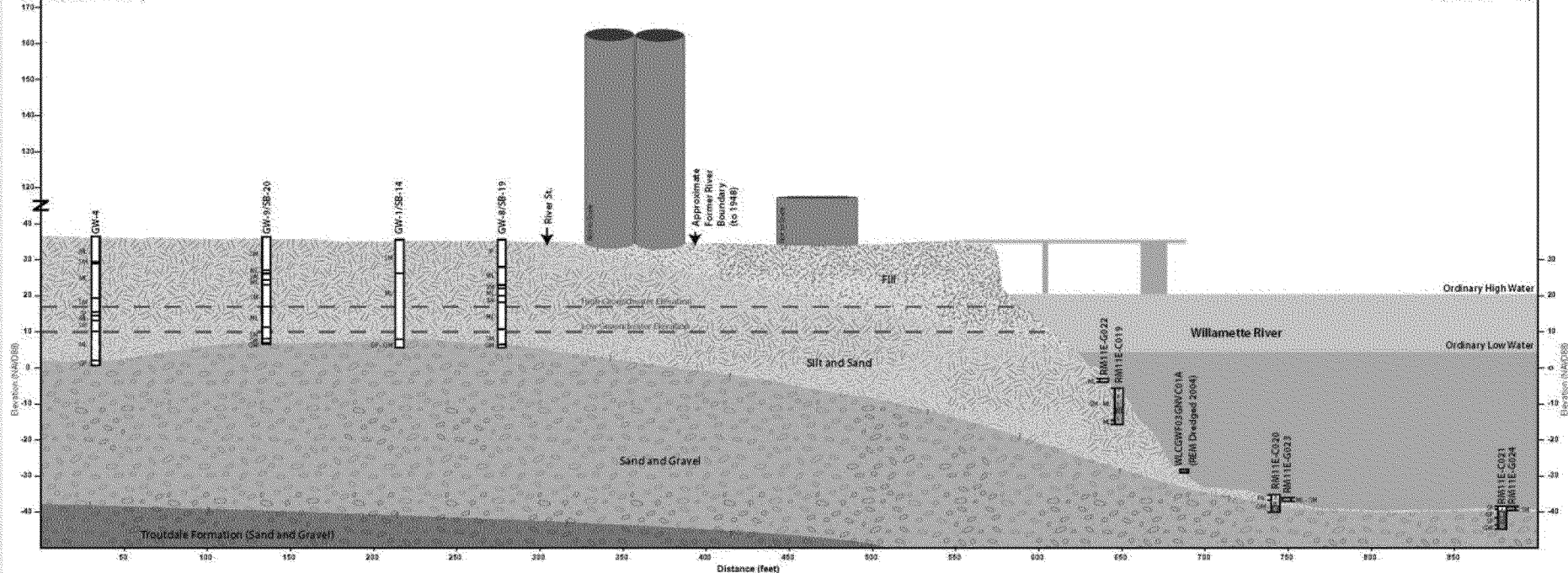
LEGEND

- Total PCBs (ug/kg)**
- Not Analyzed
 - 0 - 34
 - >34 - 75
 - >75 - 150
 - >150 - 300
 - >300 - 1000
 - >1,000
- Geology**
- Pleistocene and Recent Alluvium (undifferentiated sand and silt)
 - Coarse-grained Pleistocene Flood Deposits (sand and gravel)
 - Upper Troutdale Formation (sand and gravel)
 - Lower Troutdale Formation (silt and clay)
 - Normal River Pipeline
 - Approximate Geologic Contact
 - Seasonal Water Table Elevation Range (Feb-Mar-Apr-May)
 - Unified Soil Classification System used for Lithology abbreviations
 - Bathymetric data from a multibeam bathymetric survey performed in February and March of 2004 by David Evans and Associates



B (Northeast)

B' (Southwest)

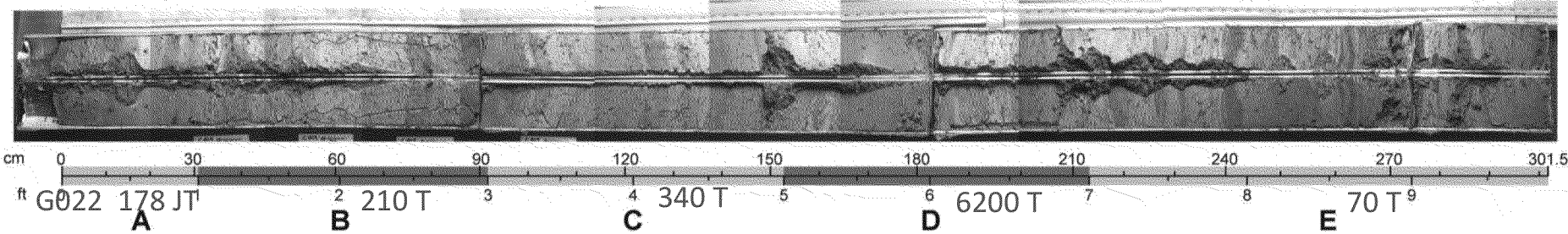


Aroclors (ug/kg)

Cross-Section B – Sediment Core Profiles

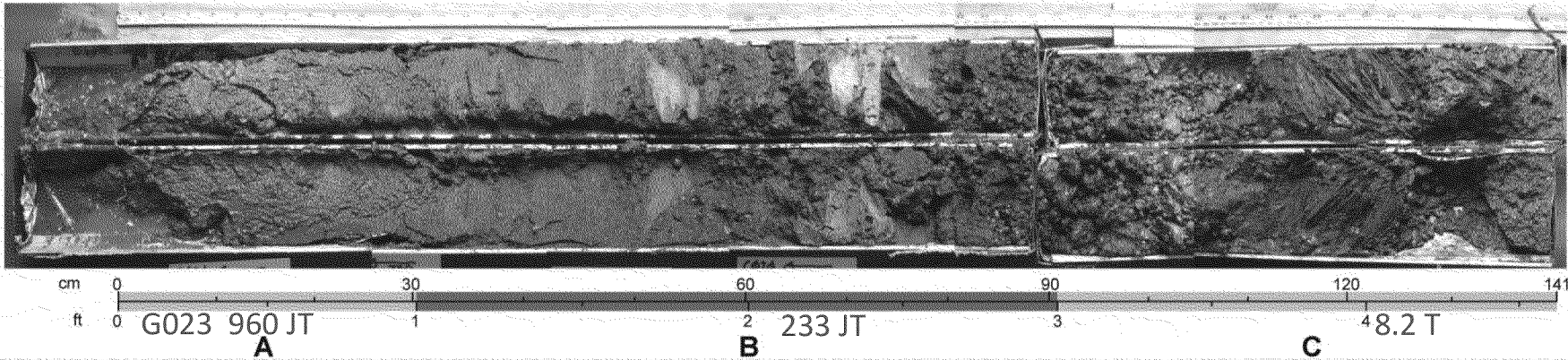
Core Processing Date and Time: 5/21/09, 07:30

RM11E - C019 Mosaic



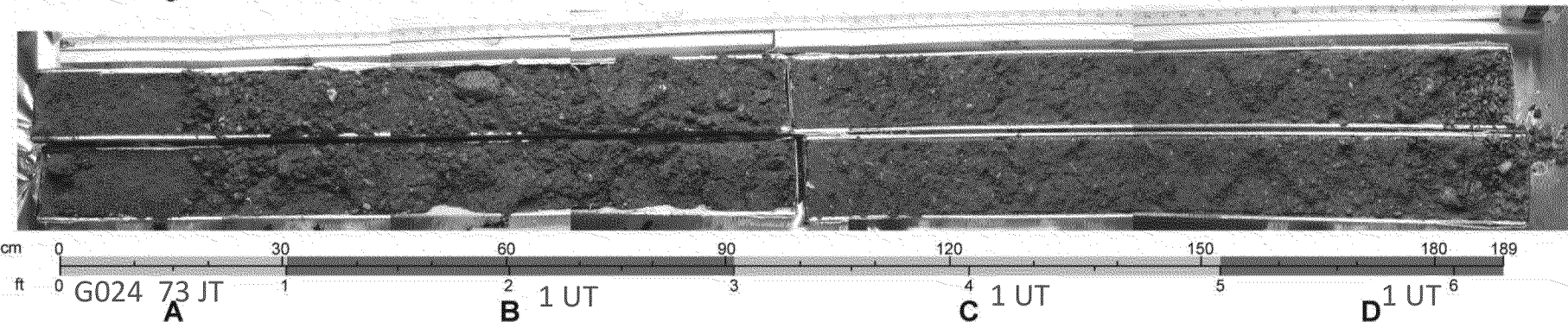
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RM11E - C020 Mosaic



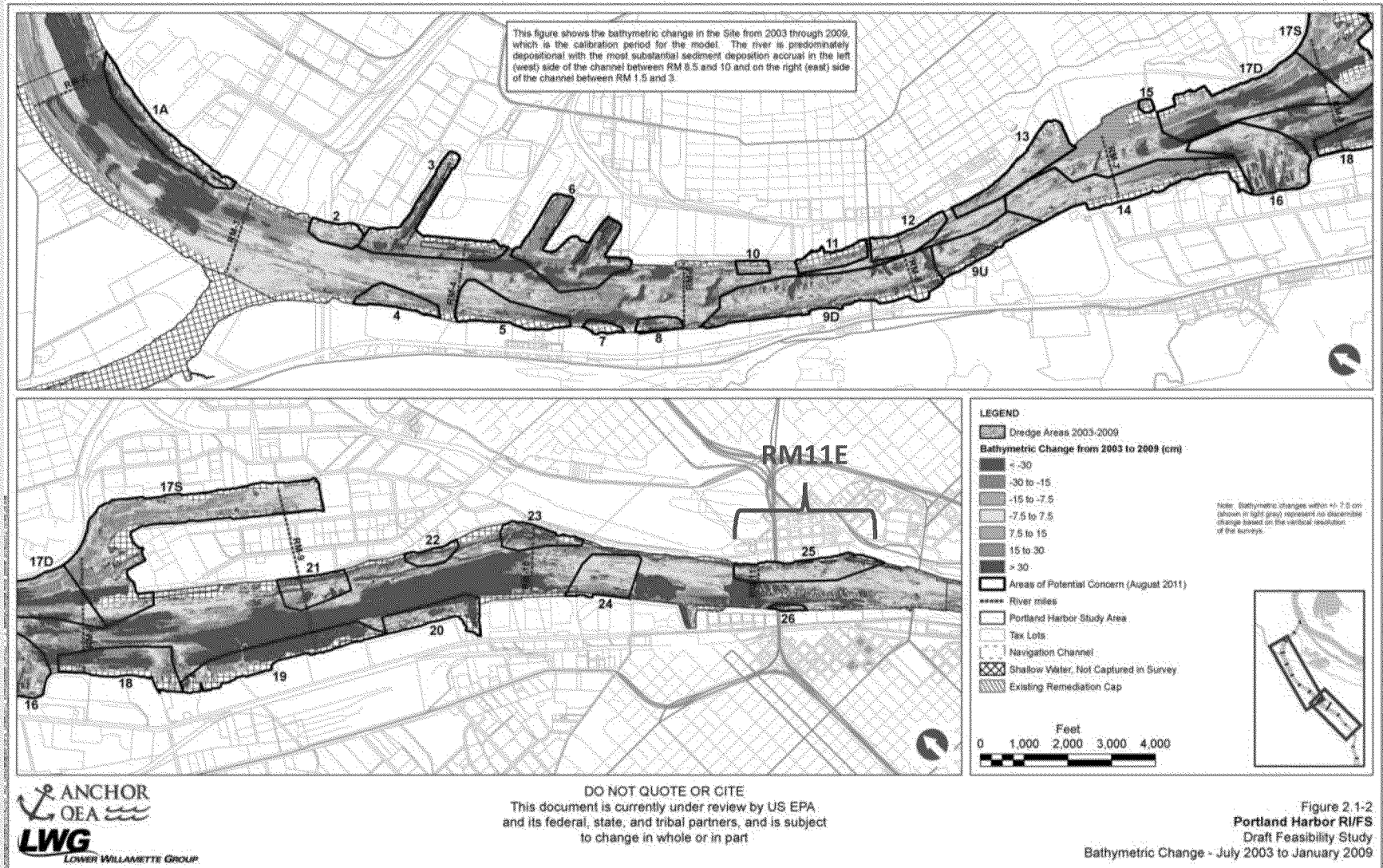
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RM11E - C021 Mosaic

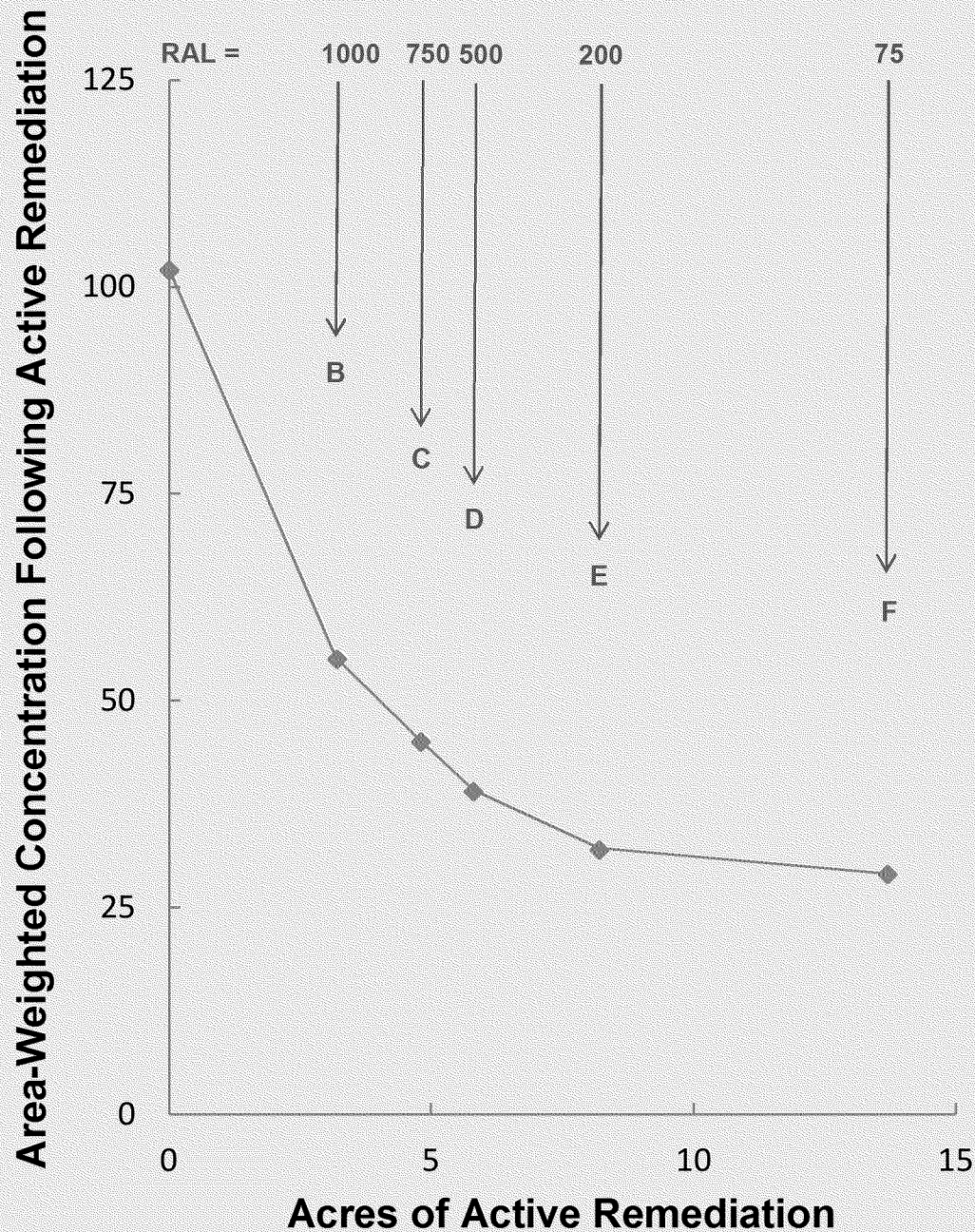




Bathymetric Change – July 2003 to Jan 2009



Alternatives Development – LWG Draft FS - Remedial Action Levels - PCBs



Modified from LWG draft FS
• SWAC area RM11.0 to 11.8
• Replacement value of 17.5 ug/kg¹⁸

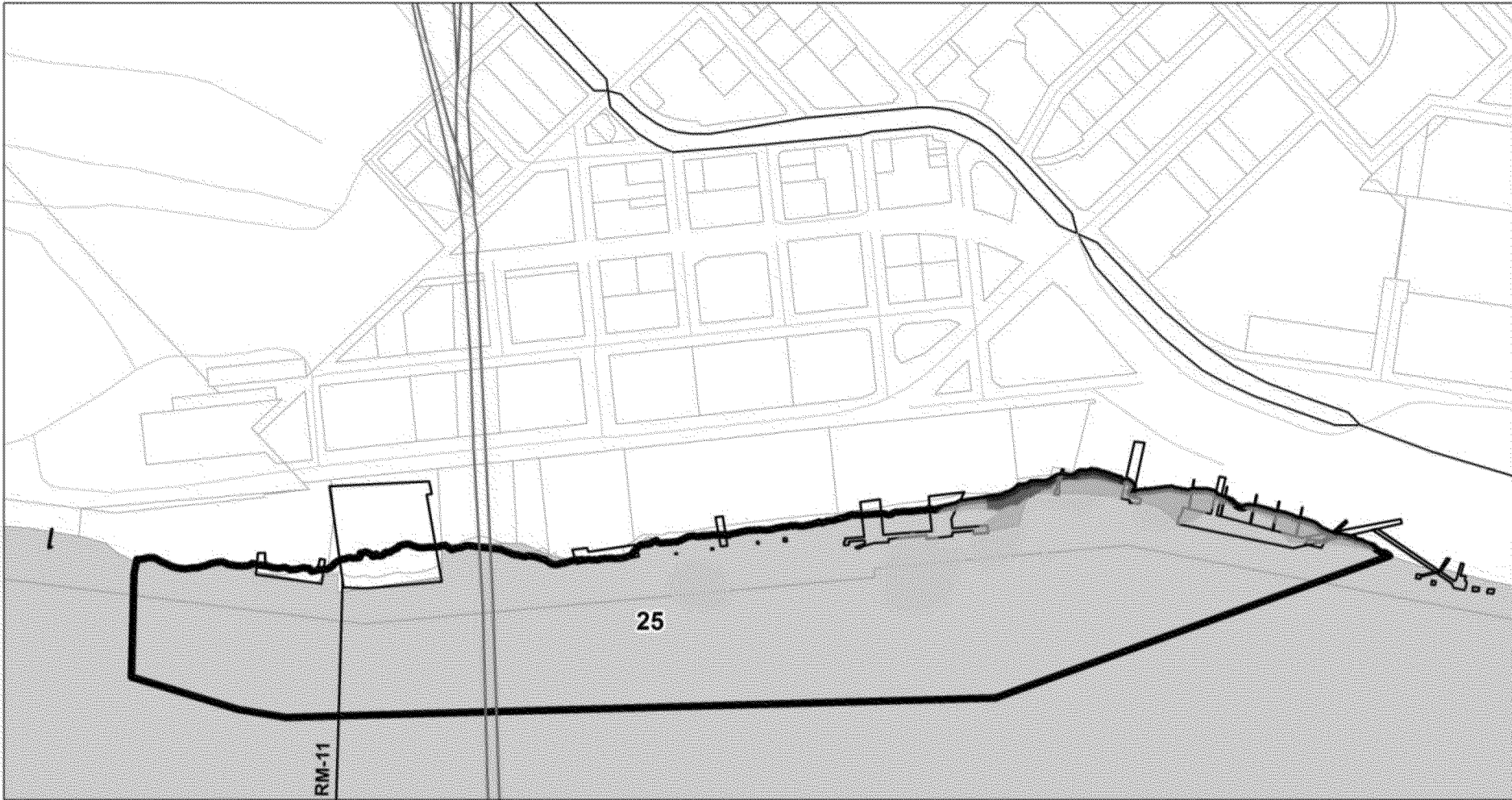


Alternatives B thru F SMAs – LWG Draft FS



SMA 25 (RM11E)	Alt B	Alt C	Alt D	Alt E	Alt F
PCBs Remedial Action Level (RAL)	1000 ug/kg	750 ug/kg	500 ug/kg	200 ug/kg	75 ug/kg
“Integrated”	\$9M to \$12M	\$13M to \$17M	\$15M to \$21M	\$17M to \$25M	\$27M to \$37M
“Removal Focused”	\$9M to \$11M	\$12M to \$17M	\$15M to \$22M	\$16M to \$23M	\$23M to \$34M

Alt Bi Technology Assignments (PCB RAL = 1000 ug/kg) – LWG Draft FS



Legend

- | | |
|-----------------------|-------------------|
| CAD/CDF covers Active | In-Situ Treatment |
| CAD/CDF covers EMNR | No Action |
| EMNR | Removal |
| Engineered Cap | River miles |

- | |
|---|
| Area of Potential Concern (August 2011) |
| Docks and Structures |
| Navigation Channel |
| Tax Lots |

Alternative B



Alt Ci Technology Assignments (PCB RAL = 750 ug/kg) – LWG Draft FS



Legend

CAD/CDF covers Active
 CAD/CDF covers EMNR
 EMNR
 Engineered Cap

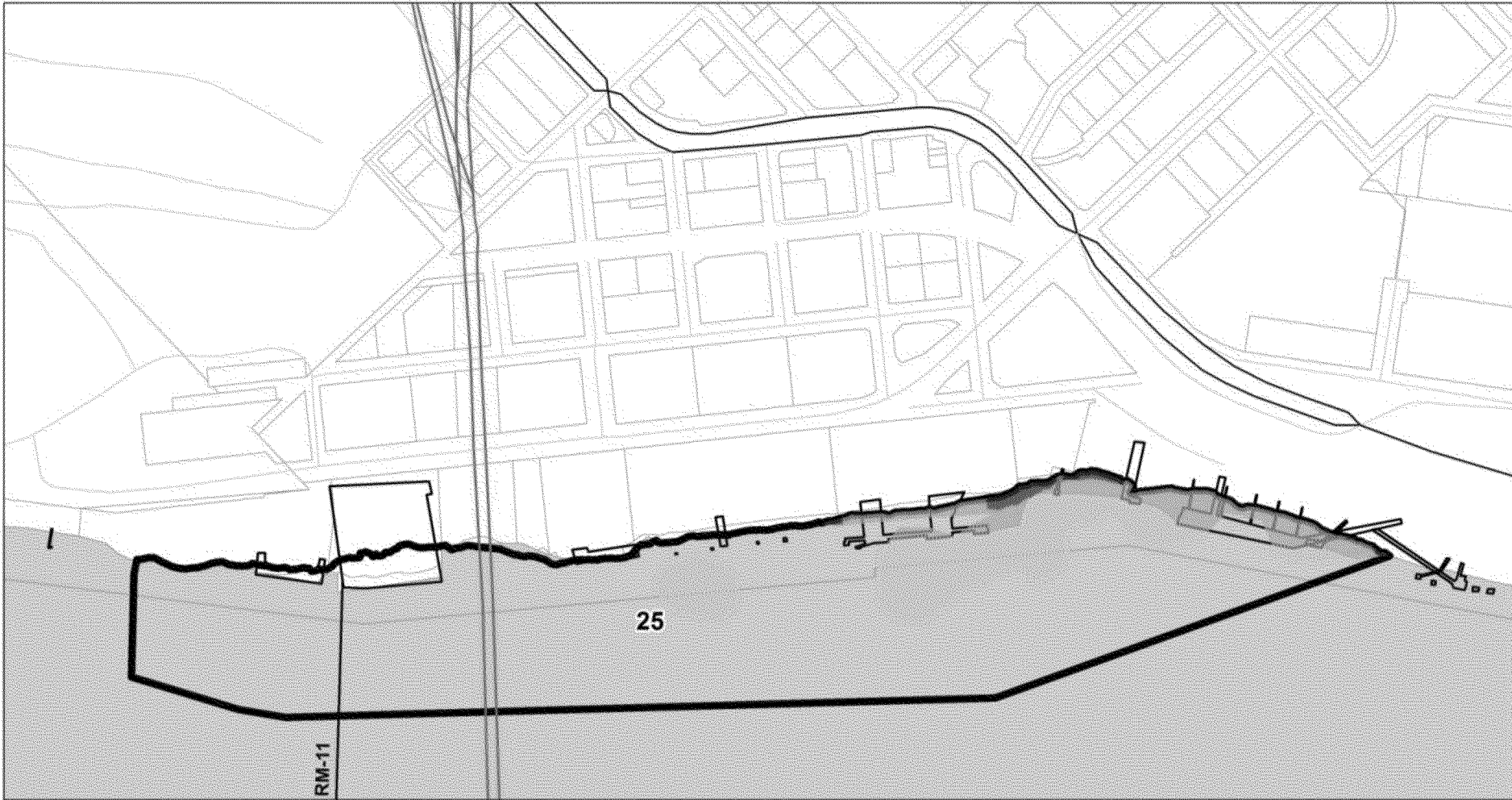
In-Situ Treatment
 No Action
 Removal
 River miles

Area of Potential Concern (August 2011)
 Docks and Structures
 Navigation Channel
 Tax Lots

Alternative C



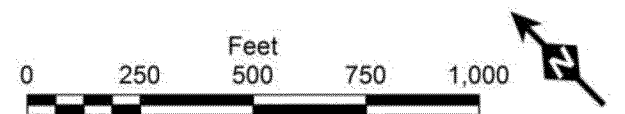
Alt Di Technology Assignments (PCB RAL = 500 ug/kg) – LWG Draft FS



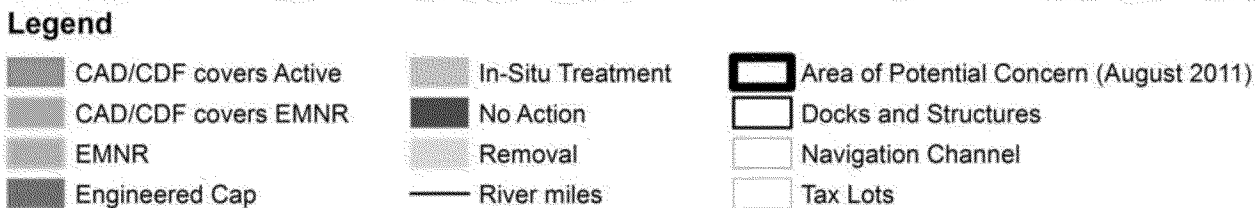
Legend

CAD/CDF covers Active	In-Situ Treatment	Area of Potential Concern (August 2011)
CAD/CDF covers EMNR	No Action	Docks and Structures
EMNR	Removal	Navigation Channel
Engineered Cap	River miles	Tax Lots

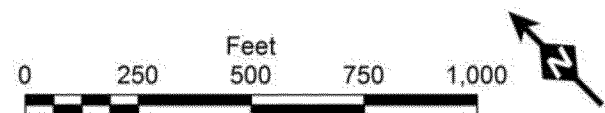
Alternative D



Alt Ei Technology Assignments (PBC RAL = 200 ug/kg) – LWG Draft FS



Alternative E



Alt Fi Technology Assignments (PCB RAL = 75 ug/kg) – LWG Draft FS



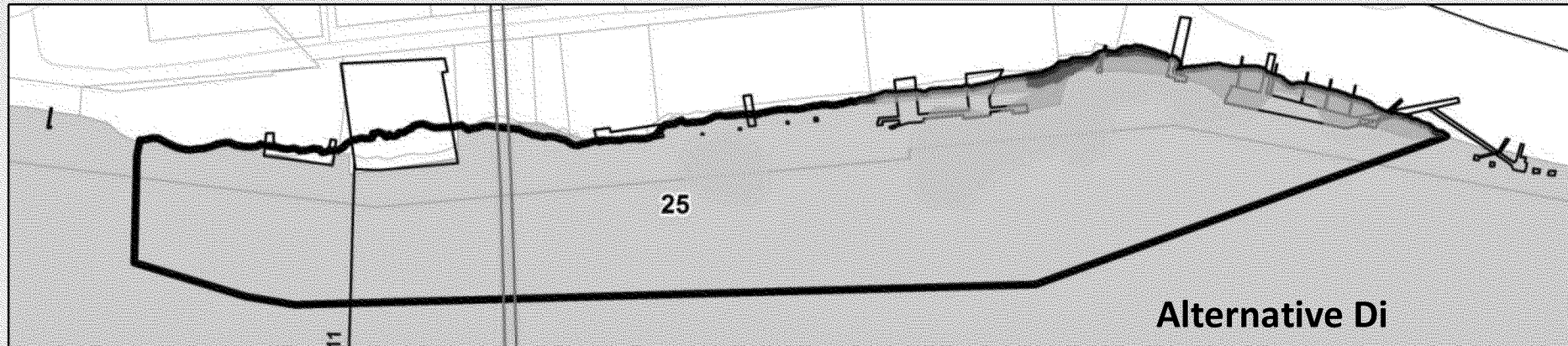
Legend

CAD/CDF covers Active	In-Situ Treatment	Area of Potential Concern (August 2011)
CAD/CDF covers EMNR	No Action	Docks and Structures
EMNR	Removal	Navigation Channel
Engineered Cap	River miles	Tax Lots

Alternative F



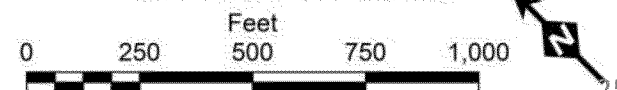
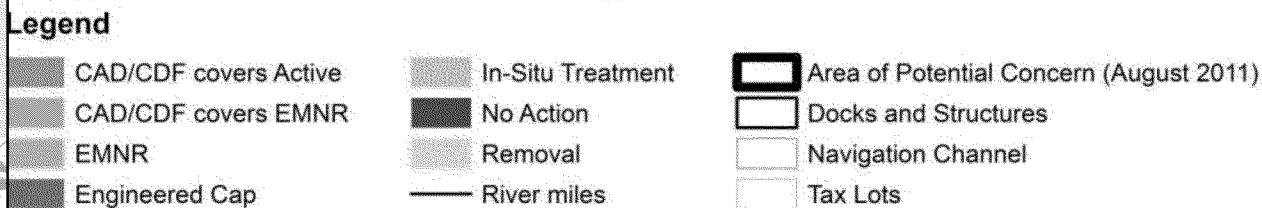
Alt Di vs Dr (similar "r" assignments for other alternatives)



Alternative Di



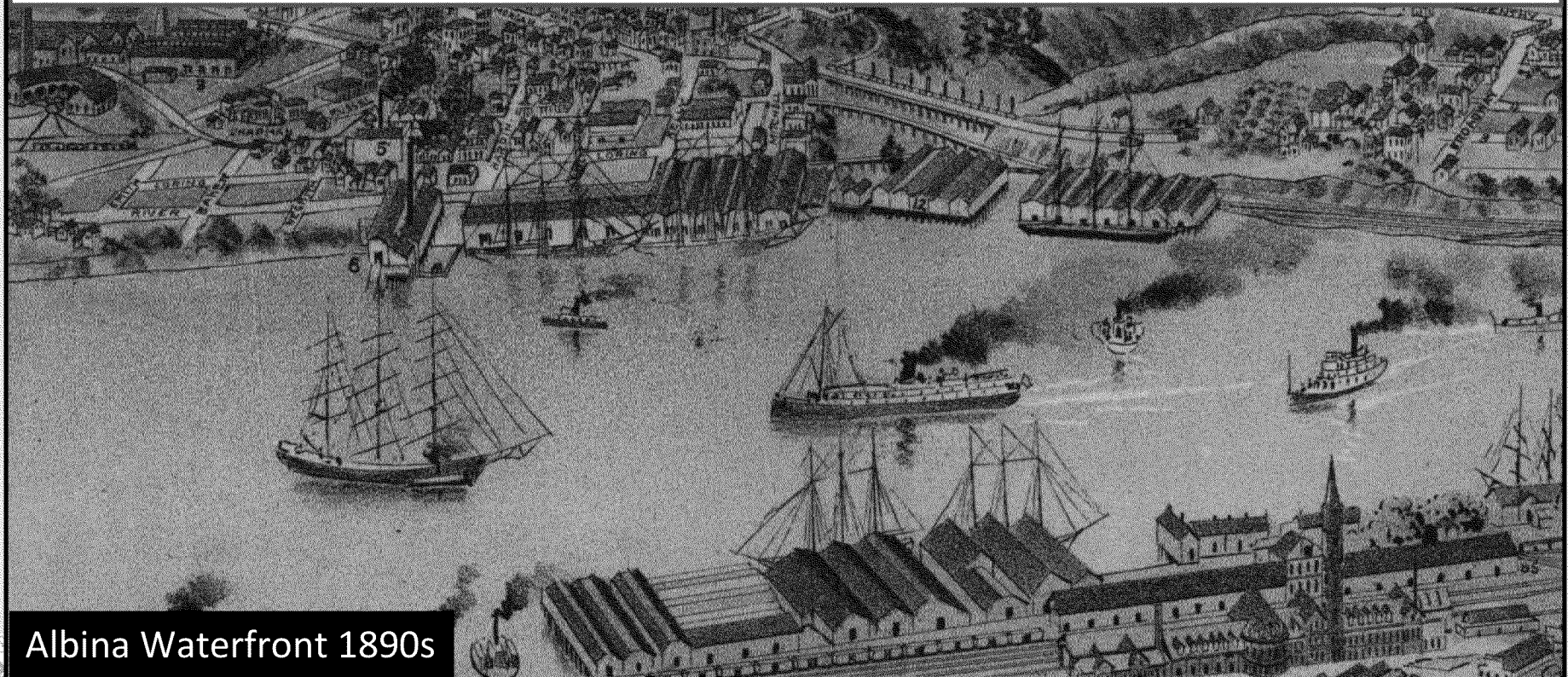
**Alternative D
Removal Focused**



RM11E and WC – Next Steps

Discuss following WC presentation

- ✓ *Identify and discuss administrative constraints and options*
- ✓ *Seek EPA agreement of proposal for DEQ lead on RM11E and Willamette Cove*
- ✓ *If we reach agreement:*
 - ❖ *Determine approach for outreach with RM11E and WC groups, Tribes, TCT, Community, LWG, congressional delegation*
 - ❖ *Document EPA /DEQ agreement to move forward*



Albina Waterfront 1890s

Willamette Cove – Placeholder



Port of Portland Dry Dock 1938